Work Plan For Citrus Exports
from the State of Florida, United States of America
to the People's Republic of China

I. Definitions

A. Products for Export: Fresh citrus fruit produced in the State of Florida

B. Pests and Diseases of Concern: According to the People's Republic of China (China), the following plant pests and diseases are of quarantine significance on citrus fruit produced in Florida: *Ceratitis capitata, Anastrepha suspensa, Pantomorus cervinus, Pseudococcus maritmus, Xanthomonas campestris pv. citri, Xanthomonas campestris pv. citrumelo*, citrus crinkly leaf virus, citrus infectious variegation virus, citrus psorosis virus.

C. Participants

1. The U.S. Department of Agriculture, Animal and Plant Health Inspection Service (APHIS)
2. State Administration for Entry - Exit Inspection and Quarantine (SAIQ) of the People's Republic of China
3. Port Branches of SAIQ
4. Florida Department of Agriculture
5. Shippers and related associations

II. Responsibilities

A. SAIQ

1. To inspect a representative sampling of counties, participating groves, shippers/packers, and storage facilities in the United States prior to initiation of this program.
2. To assess and agree with the management and supervision of the program provided by APHIS.
3. To assess APHIS' or designated cooperator's ability to ensure that the inspections are appropriately conducted and the labeling requirements are met.
4. To notify APHIS immediately upon detection of serious quarantine problems.

B. APHIS

1. To maintain the work plan for citrus fruit produced in Florida in cooperation with SAIQ and other participants, and ensure that the procedures and programs are implemented.
2. To notify SAIQ immediately when there is any positive establishment of exotic fruit flies.

3. To ensure citrus fruit destined for China is not mixed with other citrus fruit and the cartons are properly labeled.
4. During the first year, to inspect 1% of the fruit being certified for export to China. The inspection level may be reduced to as low as 0.5% if the first year's inspection results justify the reduction. Every effort shall be made to select citrus fruit from a representative sample of each of the participating growers.
5. To issue phytosanitary certificates for all shipments to China: in the remarks section, include the additional declaration: "All fruit in the shipment complies with relevant regulations of the PRC and complies with the Florida Citrus Protocol."
6. To assign a program coordinator who will be responsible for all coordination between APHIS, SAIQ, industry, the Florida Department of Agriculture, packing house operators, transportation providers, etc. This person will be available to SAIQ officials to assist in resolving problems relative to export of citrus fruit.
7. APHIS will direct that effective actions shall be taken to control those pests of concern to China in order to avoid pest occurrences. APHIS will provide SAIQ with information on pest management practices according to SAIQ requests.

C. State Officials and Other APHIS Authorized Personnel

1. To work closely with the APHIS program coordinator.
2. To comply with requirements set forth in this work plan.
3. To verify that shippers/packers and storage facilities maintain a list of their growers and are able to supply information on a grower's name and grove location.
4. The groves, packing houses, and storage facilities which export to China must be registered with APHIS, and designated by both SAIQ and APHIS
5. To inspect the citrus fruit for any evidence of pest presence or damage, and remove any suspect citrus fruit or culls from the shipment.

III. Regulatory Activity

A. The monitoring for *Ceratitis capitata* (Mediterranean fruit fly) with Jackson traps shall be set up in the designated groves at a density of one trap per square kilometer year-round. The monitoring for *Anastrepha suspensa* with McPhail traps in the designated groves will be done consistent with the Caribbean fruit fly protocol. Upon SAIQ request, APHIS will provide SAIQ with the monitoring reports for *Ceratitis capitata* and *Anastrepha suspensa* annually.

B. During the first two years of the program (i.e., the 1999-2000 and 2000-2001 export seasons) if any outbreak of *Ceratitis capitata* is detected, APHIS will immediately notify SAIQ and establish regulated quarantine areas based on U.S. National Program Guidelines. APHIS shall also suspend the export of citrus fruit from an area with a radius of 17 miles (27.2 kilometers) from the center of the pest outbreak. This restriction will be maintained until eradication is certified under the terms and conditions of the U.S. National Program Guidelines. During this two year period, scientists from the United States and China will jointly study the appropriate size of the quarantine zone. If the

scientists can come to agreement on a new standard, then that standard shall apply from the beginning of the third year. If an agreement cannot be reached, the following standard will apply from the beginning of the third year:

If any outbreak of *Ceratitis capitata* is detected, APHIS will immediately notify SAIQ and establish regulated quarantine areas based on U.S. National Program Guidelines. That quarantine shall be maintained until eradication is certified under the terms and conditions of the U.S. National Program Guidelines. During the period that the quarantine is in effect, APHIS shall suspend export of citrus fruit to China from an area with a radius of 4.5 miles (7.2 kilometers) from the center of the pest outbreak.

C. If any outbreak of *Anastrepha suspensa* is detected in a designated grove APHIS will immediately notify China and begin procedures consistent with the Caribbean fruit fly protocol. No citrus fruit from the designated grove will exported to China until the grove is recertified.

D. If any other fruit fly of quarantine concern to China is detected, APHIS will immediately notify SAIQ and establish regulated quarantine areas based on U.S. National Program Guidelines. That quarantine shall be maintained until eradication is certified under the terms and conditions of the U.S. National Program Guidelines.

IV. Shipping Requirements

A. Export inspection at the shipper/packer or storage facility will include the inspection for plant pests or diseases, and include measures taken to prevent re-infestation by pests or diseases exotic to China.

1. Inspection of the citrus fruit shall be conducted and completed at the shipper/packer or storage facility before loading of any cartons into the transportation vehicles.
2. The packing and storage of citrus fruit for export to China shall be subject to strict quarantine inspection by APHIS. In a storage facility, this packed citrus fruit shall be stored separately from packed citrus fruit from non-designated groves.
3. Each carton or pallet shall have markings to indicate place of production (county), grower or grove, or shipper/packer, or storage facility. If SAIQ cannot identify either the grower or grove, or shipper/packer, storage facility on the cartons or pallets, the citrus fruit in the cartons or pallets will be rejected.
4. Exported citrus fruit shall be transported in closed conveyance. APHIS shall perform a strict inspection of export shipments and ensure that exported citrus fruit is free of quarantine pests of concern to China. After passing inspection, a phytosanitary certificate shall be issued by APHIS. The phytosanitary certificate will be sent to the the port branch of SAIQ before the shipment arrives in China.
5. The citrus fruit shall not transit any area that is under quarantine for *Ceratitis capitata* unless it is in a sealed container.

V. Port of Entry Inspection

A. Upon arrival at the port, in accordance with the relevant articles of the Law of the People's Republic of China on the Entry and Exit Animal and Plant Quarantine and other relevant regulations, the port branch of SAIQ will conduct a quarantine inspection and examine relevant certificates and markings. If citrus fruit from unapproved growers or groves, shippers/packers, or storage facilities is found, the shipment will not be allowed entry.

B. If *Ceratitis capitata* or *Anastrepha suspensa* is found on arrival, SAIQ will immediately notify APHIS about suspending the importation of citrus fruit from that grower or grove, shipper/packer, or storage facility, and the citrus fruit will be returned, re-exported or destroyed.

C. If any other living pest or disease of quarantine concern to China, as listed in Article 13 of the Florida Citrus Protocol, is found, the citrus fruit will be treated and SAIQ will request APHIS to take relevant measures. If the same pest or disease is found again on arrival, the relevant groves will be suspended from the export program until the relevant cause is identified and appropriate measures are taken.

D. If other pests of quarantine concern to China are found, the citrus fruit will be treated in accordance with relevant articles of the Law of the People's Republic of China on the Entry and Exit Animal and Plant Quarantine.

VI. Program Initiation

A. Upon SAIQ request, APHIS will send SAIQ relevant information on the groves, shippers/packers, and storage facilities annually for SAIQ review. The groves, pest management, trapping procedures, shippers/packers, and storage facilities will be reviewed and approved by SAIQ in cooperation with APHIS at an on-site visit prior to program initiation.

B. During the first two years of the agreement (i.e., the 1999-2000 and 2000-2001 export seasons) SAIQ will send two quarantine inspectors to the United States for a total of 15 days each year to conduct pre-inspection surveys in Arizona, California, Florida and Texas.

C. If SAIQ determines that pre-inspection trips are still necessary after the first two years of the agreement, China will cover all travel expenses for those trips. APHIS will facilitate the trips and provide invitation letters.

D. Implementation Schedule. For the 1999-2000 export season, China will accept imports of citrus fruit from the following areas: Indian River, St. Lucie, Martin, Palm Beach, Collier, Hendry, and Lee counties.

After the 1999-2000 export season, each of the following counties - Brevard, DeSoto, Glades, Hardee, Highland, Lake, Manatee, Osceola, Okeechobee, Sarasota, Volusia - that China and the U.S. agree meet the following three (3) conditions will be added to the program:

-- no fruit flies of quarantine concern are intercepted during importation of Florida citrus fruit into China during the 1999-2000 export season;
-- there are no fruit fly infestations at the time of consideration in the particular counties to be added to the program;
-- USDA can provide evidence that all fruit flies of concern in the state have been eradicated from the counties under consideration based on National Program criteria.

This document, written in both English and Chinese, was signed on April 7, 1999 in Washington, D.C. Both the English and Chinese documents have equal force.

for the State Administration for
Entry-Exit Quarantine and Inspection
for the People's Republic of China

Under Secretary for Marketing
and Regulatory Programs,
U.S. Department of Agriculture

Protocol for Phytosanitary Requirements for the Export of Citrus
from the State of Texas, United States of America
to the People's Republic of China

In order to safely export fresh citrus fruit from the State of Texas, United States of America to the People's Republic of China (China), the Chinese Delegation with representatives from the Ministry of Foreign Trade & Economic Cooperation and the State Administration for Entry-Exit Inspection and Quarantine (SAIQ) of the People's Republic of China, and the United States Delegation with representatives from the Office of the United States Trade Representative and the U.S. Department of Agriculture, exchanged views and reached consensus as follows:

Article 1: The citrus fruit exported to China must come from the areas in Texas free of Mexican fruit fly (*Anastrepha ludens*) and Medfly *(Ceratitis capitata*). The citrus fruit shall be free from citrus psorosis virus and *Xanthomonas campestris pv. citri.* The groves, packing houses, and storage facilities, which export to China must be registered with the Animal and Plant Health Inspection Service (APHIS), and designated by both SAIQ and APHIS.

Article 2: APHIS will direct that effective actions shall be taken to control those pests of concern to China in order to avoid pest occurrences. APHIS will provide SAIQ with information on pest management practices according to SAIQ requests.

Article 3: The monitoring for *Anastrepha ludens* with McPhail traps and for *Ceratitis capitata* with Jackson traps shall be set up in the designated groves at a density of one trap per square kilometer between May 1 to October 31. Upon request, APHIS will provide SAIQ with monitoring reports for *Ceratitis capitata* and *Anastrepha ludens* annually.

Article 4: During the first two years of the program (i.e., the 1999-2000 and 2000-2001 export seasons) if any outbreak of *Ceratitis capitata* is detected, APHIS will immediately notify SAIQ and establish regulated quarantine areas based on U.S. National Program Guidelines. APHIS shall also suspend the export of citrus fruit from an area with a radius of 17 miles (27.2 kilometers) from the center of the pest outbreak. This restriction shall be maintained until eradication is certified under the terms and conditions of the U.S. National Program Guidelines. During this two year period, scientists from the United States and China will jointly study the appropriate size of the quarantine zone. If the scientists can come to agreement on a new standard, then that standard shall apply from the beginning of the third year. If an agreement cannot be reached, the following standard will apply from the beginning of the third year:

If any outbreak of *Ceratitis capitata* is detected, APHIS will immediately notify SAIQ and establish regulated quarantine areas based on U.S. National Program Guidelines. That quarantine shall be maintained until eradication is certified under the terms and conditions of the U.S. National Program Guidelines. During the period that the quarantine is in effect, APHIS shall suspend export of citrus fruit to China from an area with a radius of 4.5 miles (7.2 kilometers) from the center of the pest outbreak.

If any outbreak of *Anastrepha ludens* is detected, APHIS will immediately notify SAIQ and begin treatments consistent with the Mexican Fruit Fly Action Plan. No citrus fruit from the

affected grove will be exported to China until the grove is recertified.

If any other fruit fly of quarantine concern to China is detected, APHIS will immediately notify SAIQ and establish regulated quarantine areas based on U.S. National Program Guidelines. That quarantine shall be maintained until eradication is certified under the terms and conditions of the U.S. National Program Guidelines.

APHIS will immediately notify SAIQ when each quarantine ban is lifted.

Article 5: The citrus fruit exported to China shall be inspected by APHIS authorized personnel and found free of live insects and mites of quarantine concern, as listed in Article 13, and essentially free of leaves, twigs and soil. Inspectors will ensure that the citrus fruit certified for export are essentially free of rotting citrus fruit.

Article 6: The packing and storage of citrus fruit for export to China shall be subject to strict quarantine inspection by APHIS. In a storage facility, this packed citrus fruit shall be stored separately from packed citrus fruit from non-designated groves.

Article 7: Each carton or pallet shall have markings to indicate place of production (county), grower or grove, or shipper/packer, or storage facility. If the port branch of SAIQ cannot identify either the grower or grove, or shipper/packer, storage facility on the cartons or pallets, the citrus fruit in the cartons or pallets will be rejected.

Article 8: Exported citrus fruit shall be transported under closed conveyance. APHIS shall perform a strict inspection of export shipments and ensure that exported citrus fruit is free of quarantine pests of concern to China. After passing inspection, a phytosanitary certificate shall be issued by APHIS. The phytosanitary certificate will be sent to the port branch of SAIQ before the shipment arrives in China.

Article 9: The citrus fruit shall not transit any area that is under quarantine for *Ceratitis capitata* unless it is in a sealed container.

Article 10: The port branch of SAIQ will conduct quarantine inspection and examine relevant certificates and markings as the citrus fruit arrives at the designated ports. If citrus fruit from unapproved growers or groves, shippers/packers, or storage facilities is found, the shipment will not be allowed entry.

If *Ceratitis capitata* or *Anastrepha ludens* is found on arrival, SAIQ will immediately notify APHIS about suspending the importation of citrus fruit from that grower or grove, shipper/packer, and storage facilities and the citrus fruit will be returned, re-exported or destroyed. If any other living pest or disease of quarantine concern to China, as listed in Article 13, is found, the citrus fruit will be treated and SAIQ will request that APHIS take relevant measures. If the same pest or disease is found again on arrival, the relevant grove will be suspended from the export program until the relevant cause is identified and appropriate measures are taken. If other pests of quarantine concern to China are found, the citrus fruit will be treated in accordance with the relevant articles of the Law of the People's Republic of China

on the Entry and Exit Animal and Plant Quarantine.

Article 11: Upon SAIQ request, APHIS will send SAIQ relevant information on the groves, shippers/packers, and storage facilities annually for SAIQ review. The groves, pest management, trapping procedures, shippers/packers, and storage facilities will be reviewed and approved by SAIQ in cooperation with APHIS at an on-site visit prior to program initiation.

If major quarantine problems are detected during the importation of citrus fruit into China, APHIS and SAIQ will consult about SAIQ conducting a review of the particular quarantine problem in the United States.

During the first two years of the agreement (i.e., the 1999-2000 and 2000-2001 export seasons) SAIQ will send two quarantine inspectors to the United States for a total of 15 days each year to conduct pre-inspections in Arizona, California, Florida and Texas.

Travel expenses (i.e., transportation, lodging, and a per diem allowance) for all of the trips described above in Article 11 will be funded by the United States.

If SAIQ determines that pre-inspection trips are still necessary after the first two years of the agreement, China will cover all travel expenses for those trips. APHIS will facilitate the trips and provide invitation letters.

Article 12: Ports of entry: Haikou, Guangzhou, Shanghai, Dalian, Qingdao, Nanjing and Tianjin.

Article 13: The pests and diseases of quarantine concern to China are:

Anastrepha ludens
Ceratitis capitata
Citrus psorosis virus
Xanthomonas campestris pv. citri

Article 14: This agreement is valid for one year from the date of signature. If neither party requests revision or termination of the agreement within two months before its expiration date, the agreement shall be extended automatically for additional 12 month periods.

This document, written in both English and Chinese, was signed on April 7, 1999 in Washington, D.C. Both the English and Chinese documents have equal force.

for the State Administration for
Entry-Exit Quarantine and Inspection
for the People's Republic of China

Michael V. Dunn
Under Secretary for Marketing
and Regulatory Programs,
U.S. Department of Agriculture

Work Plan for Citrus Exports
from the State of Texas, United States of America
to the People's Republic of China

I. Definitions

A. Products for export: Fresh citrus fruit produced in Texas.

B. Pests and Diseases of Quarantine Concern: According to the People's Republic of China (China), the following plant pests are of quarantine significance on citrus produced in Texas: *Ceratitis capitata, Anastrepha ludens, Xanthomonas campestris pv. citri*, citrus psorosis virus.

C. Participants

1. The U.S. Department of Agriculture, Animal and Plant Health Inspection Service (APHIS)
2. State Administration for Entry - Exit Inspection and Quarantine (SAIQ) of the People's Republic of China
3. Port Branches of SAIQ
4. Texas Department of Agriculture
5. Shippers and related associations

II. Responsibilities

A. SAIQ

1. To inspect a representative sampling of participating groves, shippers/packers, and storage facilities in the United States prior to initiation of this program.
2. To assess and agree with the management and supervision of the program provided by APHIS.
3. To assess APHIS' or designated cooperator's ability to assure the inspections are appropriately conducted and the labeling requirements are met.
4. To notify APHIS immediately upon detection of serious quarantine problems.

B. APHIS

1. To maintain the work plan for citrus fruit produced in Texas in cooperation with SAIQ and other participants, and ensure that the procedures and programs are implemented.
2. To notify SAIQ immediately when there is any positive establishment of exotic fruit flies.
3. To ensure citrus fruit destined for China is not mixed with other citrus fruit and the cartons are properly labeled.
4. During the first year, to inspect 1% of the fruit being certified for export to PRC. The inspection level may be reduced to as low as 0.5% if the first year's

inspection results justify the reduction. Every effort shall be made to select citrus fruit from a representative sample of each of the participating growers.

5. To issue phytosanitary certificates for all shipments to China: in the remarks section, include the additional declaration: "All fruit in the shipment complies with relevant regulations of the PRC and complies with the Texas Citrus Protocol."
6. To assign a program coordinator who will be responsible for all coordination between APHIS, SAIQ, industry, Texas Department of Agriculture, packing house operators, transportation providers, etc. This person will be available to SAIQ officials to assist in resolving problems relative to export of citrus fruit.
7. APHIS will direct that effective actions shall be taken to control those pests of concern to China in order to avoid pest occurrences. APHIS will provide SAIQ with information on pest management practices according to SAIQ requests.

C. State Officials and Other APHIS Authorized Personnel

1. To work closely with the APHIS program coordinator.
2. To comply with requirements set forth in this work plan.
3. To verify that shippers/packers and storage facilities maintain a list of their growers and are able to supply information on a grower's name and grove location.
4. The groves, packing houses, and storage facilities which export to China must be registered with APHIS, and designated by both SAIQ and APHIS
5. To inspect the citrus fruit for any evidence of pest presence or damage, and remove any suspect citrus fruit or culls from the shipment.

III. Regulatory Activity

A. The monitoring for *Anastrepha ludens* (Mexican fruit fly) with McPhail traps and for *Ceratitis capitata* (Mediterranean fruit fly) with Jackson traps shall be set up in the designated groves at a density of one trap per square kilometer between May 1 and October 31. Upon SAIQ request, APHIS will provide SAIQ with monitoring reports for *Anastrepha ludens* and *Ceratitis capitata* annually.

B. During the first two years of the program (i.e., the 1999-2000 and 2000-2001 export seasons) if any outbreak of *Ceratitis capitata* is detected, APHIS will immediately notify SAIQ and establish regulated quarantine areas based on U.S. National Program Guidelines. APHIS shall also suspend the export of citrus fruit from an area with a radius of 17 miles (27.2 kilometers) from the center of the pest outbreak. This restriction shall be maintained until eradication is certified under the terms and conditions of the U.S. National Program Guidelines. During this two year period, scientists from the United States and China will jointly study the appropriate size of the quarantine zone. If the scientists can come to agreement on a new standard, then that standard shall apply from the beginning of the third year. If an agreement cannot be reached, the following standard will

apply from the beginning of the third year:

If any outbreak of *Ceratitis capitata* is detected, APHIS will immediately notify SAIQ and establish regulated quarantine areas based on U.S. National Program Guidelines. That quarantine shall be maintained until eradication is certified under the terms and conditions of the U.S. National Program Guidelines. During the period that the quarantine is in effect, APHIS shall suspend the export of citrus fruit to China from an area with a radius of 4.5 miles (7.2 kilometers) from the center of the pest outbreak.

C. If any outbreak of *Anastrepha ludens* is detected, APHIS will immediately notify SAIQ and begin treatments consistent with the Mexican Fruit Fly Action Plan. No citrus fruit from the affected grove will be exported to China until the grove is recertified.

D. If any other fruit fly of quarantine concern to China is detected, APHIS will immediately notify SAIQ and establish regulated quarantine areas based on U.S. National Program Guidelines. That quarantine shall be maintained until eradication is certified under the terms and conditions of the U.S. National Program Guidelines.

IV. Shipping Requirements

A. Export inspection at the shipper/packer or storage facility will include the inspection for plant pests, and include measures taken to prevent re-infestation by pests exotic to China.

1. Inspection of the fruit shall be conducted and completed at the shipper/packer or storage facility before loading of any cartons into the transportation vehicles.
2. The packing and storage of citrus fruit for export to China shall be subject to strict quarantine inspection by APHIS. In a storage facility, this packed citrus fruit shall be stored separately from packed citrus fruit from non-designated groves.
3. Each carton or pallet shall have markings to indicate place of production (county), grower or grove, or shipper/packer, or storage facility. If SAIQ cannot identify either the grower or grove, or shipper/packer, storage facility on the cartons or pallets, the citrus fruit in the cartons or pallets will be rejected.
4. Exported citrus fruit shall be transported in closed conveyance. APHIS shall perform a strict inspection of export shipments and ensure that exported citrus fruit is free of quarantine pests of concern to China. After passing inspection, a phytosanitary certificate shall be issued by APHIS. The phytosanitary certificate will be sent to the port branch of SAIQ before the shipment arrives in China.
5. The citrus fruit shall not transit any area that is under quarantine for *Ceratitis capitata* unless it is in a sealed container.

V. Port of Entry Inspection

A. Upon arrival at the port, in accordance with the relevant articles of the Law of the People's Republic of China on the Entry and Exit Animal and Plant Quarantine and other relevant regulations, the port branch of SAIQ will conduct a quarantine inspection and examine relevant certificates and markings. If citrus fruit from unapproved growers or groves, shippers/packers, or storage facilities is found, the shipment will not be allowed entry.

B. If *Ceratitis capitata* or *Anastrepha ludens* is found on arrival, CIQ will immediately notify APHIS about suspending the importation of citrus fruit from that grower or grove, shipper/packer, or storage facility, and the citrus fruit will be returned, re-exported or destroyed.

C. If any other living pest or disease of quarantine concern to China, as listed in Article 13 of the Texas Citrus Protocol, is found, the citrus fruit will be treated and SAIQ will request APHIS to take relevant measures. If the same pest or disease is found again on arrival, the relevant grove will be suspended from the export program until the relevant cause is identified and appropriate measures are taken.

D. If other pests of quarantine concern to China are found, the citrus fruit will be treated in accordance with the relevant articles of the Law of the People's Republic of China on the Entry and Exit Animal and Plant Quarantine.

VI. Program Initiation

A. Upon SAIQ request, APHIS will send SAIQ relevant information on the groves, shippers/packers, and storage facilities annually for SAIQ review. The groves, pest management, trapping procedures, shippers/packers and storage facilities will be review and approved by SAIQ in cooperation the APHIS at an on-site visit prior to program initiation.

B. During the first two years of the agreement (i.e., the 1999-2000 and 2000-2001 export seasons) SAIQ will send two quarantine inspectors to the United States for a total of 15 days each year to conduct pre-inspections in Arizona, California, Florida and Texas.

C. If SAIQ determines that pre-inspection trips are still necessary after the first two years of the agreement, China will cover all travel expenses for those trips. APHIS will facilitate the trips and provide invitation letters.

This document, written in both English and Chinese, was signed on April 7, 1999 in Washington, D.C. Both the English and Chinese documents have equal force.

for the State Administration for
Entry-Exit Quarantine and Inspection
for the People's Republic of China

Under Secretary for Marketing
and Regulatory Programs,
U.S. Department of Agriculture

ADDENDUM C

To assure clarity and consistency as to the basis for U.S. certification regarding TCK, the following sampling and testing procedures, as referenced in the Agreement on U.S.-China Agricultural Cooperation, will be used on shipments of U.S. wheat sold to the PRC.

Sampling

Each wheat lot will be sampled in accordance with existing procedures prescribed for all export lots of grain as specified in the United States Grain Standards Act (7 USC 71 et seq.), regulations thereunder, and Grain Inspection, Packers and Stockyards Administration's (GIPSA) Federal Grain Inspection Service (FGIS) Grain Inspection Handbook.

A representative sample will be obtained from the running grain stream on a specified interval (every 15-20 seconds) with a diverter-type (D/T) mechanical sampler approved by FGIS after the final elevation of the wheat prior to loading at the export elevator.

For the purposes of determining lot quality and uniformity, FGIS inspects "sublot" samples, normally representing up to 1,640 metric tons (depending on the average hourly loading rate of the elevator). A portion of each sublot sample will be combined to make a composite sample representing each lot loaded aboard the vessel. The composite sample will be reduced to 1,000 grams using approved equipment. The 1,000-gram composite sample will be divided in half: one for the TCK analysis, and one to be held on file for 90 days. FGIS will apply a USDA-FGIS seal to the sample for analysis and send it by overnight delivery to the designated FGIS or FGIS-approved laboratory for analysis.

Sample Assay

From each 500-g composite a sample 50-g sample will be drawn using an official divider and analyzed for TCK. Spores will be isolated from the 50-g sample using minor modifications of standard ISTA seed-wash protocols that involve washing, sieving, centrifuging, resuspending and examining pelleted spores and extraneous material under a microscope. The 50-g sample will be swirled with 100 ml of Tween-20 water in a 500 ml flask for 5 minutes, then poured through a 53 µm nylon screen. The entire filtrate containing any teliospores will be centrifuged for 5 minutes at 600 X g and the supernatant removed. The pellet will be resuspended in 250-500 µl Shear's mounting medium, depending upon the amount of debris. The number of teliospores observed in some samples may make visual counting of all spores impractical, therefore, a statistical method for estimation of teliospore concentration was developed.

a. Teliospore Count and Identification

The number of drops (D) in a sample suspension must be determined. While some variation may exist, the number of drops must be accurately measured. There must also be at least 6 drops in the sample suspension. If not, the sample must be prepared again to meet this requirement.

The first slide will be prepared with one drop of the sample suspension and a second slide with two drops, using separate covers so that they can be completely isolated. Up to 3 additional slides will be prepared with three isolated drops each, or until the sample

suspension is totally exhausted. Debris on the slide should be in a single thin layer for ease of observation. The slides will be scanned with a microscope at 100X- 400X. Obviously broken spores, i.e., less than 75 percent of a spore, will not be counted.

The number of spores on the first slide of one drop (Cl) will be counted and the number of spores for the sample computed as:

$$Tl = Cl * D$$

If T1 >70, T1 will be reported as the total number of spores for the sample. If Tl < or =70, the number of spores in the two drops on the second slide will be counted and added to the total number of spores on the first slide (C2). The number of spores for the sample will then be computed as:

$$T2 = (C2 * D)/3$$

If T2>50, T2 (rounded to integer value) will be reported as the total number of spores for the sample.

If T2< or =50, then the number of spores on the third slide will be counted, the total number of spores on all three slides (C3) will be summed, and the number of spores for the sample will be calculated as:

$$T3 = (C3 * D)/6$$

If T3>30, T3 (rounded to integer value) will be reported as the total number of spores for the sample.

If T3< or =30, then the number of spores on the fourth and fifth slides will be counted, the total number of spores on all 5 slides (C4) will be summed, and the number of spores for the sample will be calculated as:

$$T4 = (C4 * D)/ 12$$

T4 (rounded to integer value) is reported as the total of spores for the sample.

If there are less than 12 drops in the suspension, the total count of spores on all slides will be recorded as the total. If no teliospores are found in the first 12 drops, the remainder of the sample will be examined and the number of teliospores will be recorded.

Between sample extractions, all extraction glassware and sieves should be washed and soaked in 33% bleach solution for 15 minutes, then thoroughly rinsed again and stored covered and away from airborne contamination. (Note: The purpose of the bleach is to bleach out all of the pigment from any spores that may be trapped on the filter. If a colorless spore is observed in a sample, it will not be counted.)

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b. Spore Identification

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TH 11/22/99

The method jointly developed by USDA's Agricultural Research Service (ARS) and the PRC will be utilized. Identification of *T. controversa* teliospores will be based on confirmation of reticulum depth where reticulations greater than 0.95 µ will be considered TCK and those equal to or less than 0.95 µ are *T. tritici* (PRC/ARS, unpublished).

A microscope equipped with video camera and monitor will be used to scan the slides at 100X. When a spore is encountered, the scope is to be switched to oil immersion at 1000X to observe the teliospore. Broken spores will not be measured. The spore will be centered and the image redirected to the monitor.

The focus is adjusted on the periphery of the spore so that the endospore wall becomes a sharp black line. Using a 15-cm plastic rule, the depth of the reticulum is measured from the center of this dark line to the top of the clearest reticulum "spike". Four measurements will be taken from each spore, with points chosen that closely correspond to points on a compass.

c. Logistics Index

$$\text{Index} = e^{a+bR}/1+e^{a+bR}$$

a = -10.6914 b= 11.6214

R= reticulum e= 2.71828

The mean of the four measurements will be calculated and converted to micrometers using the optical conversion factor determined by the microscope/monitor system being used. The Logistics Index value can be determined using the Logistics Index equation above or Table 1 to determine the corresponding index for the reticulum depth. The index can be interpreted as the probability that a teliospore is TCK. In general, an index value over 0.5 (reticulum depth =0.95 µm) would indicate that the spore is TCK.

Table-1. Logistics Indices for the identification of *Tilletia controversa* (TCK)

Reticulum (µm)	Logistics Index	Reticulum (µm)	Logistics Index
0.05	0.000	**1.00**	0.717
0.10	0.000	**1.05**	0.819
0.15	0.000	**1.10**	0.890
0.20	0.000	**1.15**	0.935
0.25	0.000	**1.20**	0.963
0.30	0.001	**1.25**	0.979
0.35	0.001	**1.30**	0.988
0.40	0.002	**1.35**	0.993
0.45	0.004	**1.40**	0.996
0.50	0.008	**1.45**	0.998
0.55	0.013	**1.50**	0.999
0.60	0.024	**1.55**	0.999
0.65	0.042	**1.60**	1.000
0.70	0.072	**1.65**	1.000

0.75	0.122	**1.70**	1.000
0.80	0.199	**1.75**	1.000
0.85	0.307	**1.80**	1.000
0.90	0.442	**1.85**	1.000
0.95	0.586	**1.90**	1.000

Logistic indices values of 0.586 or above are considered TCK

d. Absolute and Relative Indices

When evaluating an entire sample, a maximum of 30 spores will be measured. The Absolute Index will be calculated by summing the Logistics Index values and can be interpreted as the expected number of TCK spores in a fixed sample size. The Relative Index is the average of the Logistics Indices and is interpreted as the proportion of TCK spores in a fixed sample size.

Certification

Each shipment will be certified by FGIS. The testing laboratory will notify the FGIS field office that performed the original sampling of the analysis results. This field office will issue an official export inspection certificate with the following statement.

"Tilletia controversa Kuhn spores (exceed/do not exceed) ~~43,000~~ 30,000 per 50 grams of sample."

11/22/99

I, Robert T. Novick, certify that this is a true and authentic copy of the "Agreement on U.S.-China Agricultural Cooperation."

12/2/99

Negotiators' Note:

We, the undersigned, verify that the corrections of pages one through four of Addendum C of the "Agreement on U.S.-China Agricultural Cooperation" were agreed and initialed on November 22, 1999.

On Behalf of the United States of America

Date: 12/2/99

On Behalf of the Peoples Republic of China

Date: 02/12/99

11/22/99

11/22/99